PATENT   Atty Docket No.: 10015452-1
                                                          App. Ser. No.: 10/073,850

IN THE CLAIMS:

Please find a listing of the claims below. The statuses of the claims are shown in parentheses.

1. (Currently amended) A method for displaying computer system runtime information, comprising the steps of:

displaying a plurality of runtime information items in a first hyperbolic tree as a plurality of first nodes;

assigning a unique identifier for each of said plurality of first nodes displayed in said first hyperbolic tree;

showing one or more links between first nodes in said first hyperbolic tree, with said one or more links representing node causal relationships;

moving a particular ~~tree~~ one of said first nodes of said first hyperbolic tree to a center node position in said first hyperbolic tree if upon a user input ~~selects~~ selecting said particular ~~tree~~ first node; and

generating a second hyperbolic tree that includes a plurality of second nodes;

assigning a unique identifier for each of said plurality of second nodes;

generating a linking graph as a third hyperbolic tree that links said first hyperbolic tree and ~~a~~ said second hyperbolic tree, said third hyperbolic tree includes a plurality of third nodes, said step of generating includes,

at least one of said third nodes inheriting the unique identifier assigned to one of said first nodes in said first hyperbolic tree to correspond with the one first node;

at least another one of the third nodes inheriting the unique identifier assigned to one of the second nodes in the second hyperbolic tree to correspond with the one second node; and

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<u>generating the third hyperbolic tree to show a link between the at least one</u>
<u>third node and the at least another third node, with the link representing a node causal</u>
<u>relationship based on the inherited unique identifiers to link the first hyperbolic tree</u>
<u>with the second hyperbolic tree.</u>

2. (Original) The method of claim 1, wherein the displaying step dynamically
generates said first hyperbolic tree.

3. (Previously Presented) The method of claim 1, further comprising: displaying the
node causal relationships and the runtime information items in a non-tree graph.

4. (Currently amended) The method of claim 1, wherein: ~~a user-input-to-a-displayed~~
~~hyperbolic-tree-is-capable-of-expanding-or-contracting-said-displayed-hyperbolic-tree.~~
<u>the plurality of first nodes in the first hyperbolic tree contain interface definitions for</u>
<u>components in an application; and</u>
<u>the plurality of second nodes in the second hyperbolic tree represent function calls</u>
<u>and threads spawned from at least one of the function calls.</u>

5. (Cancelled).

6. (Currently amended) The method of claim 1, wherein the step of generating a
linking graph that links said first hyperbolic tree and ~~a~~ <u>the</u> second hyperbolic tree comprises:

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generating the linking graph ~~as~~ the third hyperbolic tree that ~~links said first hyperbolic~~

~~tree and a second hyperbolic tree if~~ upon a user input ~~is~~ being a navigation input that selects

said second hyperbolic tree.

7. (Canceled).

8. (Previously Presented) The method of claim 1, wherein the step of generating said

linking graph further comprises dynamically generating said linking graph.

9. (Currently amended) The method of claim 1, further comprising the step of

moving into focus a selected one of the second nodes from a the second hyperbolic tree,

wherein said selected node was in a contracted subtree.

10. (Currently amended) A method for displaying computer system runtime

information on an electronic display device, comprising the steps of:

displaying on the electronic display device a plurality of runtime information items in

a first hyperbolic tree as a plurality of nodes;

showing on the electronic display device one or more links between nodes in said first

hyperbolic tree, with said one or more links representing node causal relationships;

the electronic display device automatically moving a particular tree node of said first

hyperbolic tree to a center node position in said first hyperbolic tree in the displaying of the

first hyperbolic tree upon receiving a user input selection of said particular tree node; and

in response to a user input being a navigation input that selects another hyperbolic

tree, generating a linking graph for displaying on the electronic display device as a third

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<u>hyperbolic tree</u> that links said first hyperbolic tree and a second hyperbolic tree ~~upon-a-user input-being-a-navigation-input-that-selects-said-second-hyperbolic-tree,~~ <u>wherein the third hyperbolic tree includes at least one node that is external to the first hyperbolic tree and the second hyperbolic tree includes the at least one node of the third hyperbolic tree.</u>

11. (Currently amended) The method of claim 10, wherein the displaying step dynamically generates said first hyperbolic tree<u>, and the method further comprises displaying the node causal relationships and the runtime information items in a non-tree graph.</u>

12. (Canceled).

13. (Original) The method of claim 10, wherein a user input to a displayed hyperbolic tree is capable of expanding or contracting said displayed hyperbolic tree.

14. (Currently amended) A visualization system adapted for displaying runtime information from a computer system, comprising:

a repository for storing a plurality of runtime information items from said computer system;

a display device capable of displaying one or more runtime information items of said plurality of runtime information items; and

an analyzer for retrieving said one or more runtime information items from said plurality of runtime information items, processing said one or more runtime information items, and generating a display of said one or more runtime information items on said display device;

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wherein said display device displays said runtime information as at least two hyperbolic trees, each having a plurality of tree nodes;

wherein said analyzer is operable to assign a unique identifier for each of the tree nodes in said at least two hyperbolic trees, and wherein said unique identifier is used for cross-linking between one of the plurality of nodes in a first one of said at least two hyperbolic trees and one of the plurality of nodes in a second one of said at least two hyperbolic trees to generate a third hyperbolic tree representing a linking graph based on the first and second hyperbolic trees.

15. (Original) The system of claim 14, wherein said display device communicates with said analyzer over a second communication link.

16. (Original) The system of claim 14, wherein said repository communicates with said analyzer over a first communication link.

17. (Original) The system of claim 14, wherein said at least two hyperbolic trees comprises an interface repository hyperbolic tree.

18. (Currently amended) The system of claim 14, wherein a the first hyperbolic tree of said at least two hyperbolic trees comprises a dynamic call graph hyperbolic tree with the plurality of nodes therein representing function calls and threads spawned from at least one of the function calls, and the second hyperbolic tree comprises a system characterization report with the plurality of nodes therein representing behavior information of the system.

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19. (Original) The system of claim 14, wherein said at least two hyperbolic trees represent different aspects of a system characterization.

20. (Original) The system of claim 14, wherein said analyzer assigns a unique identifier for each displayed hyperbolic tree node, and wherein said unique identifier is used for cross-linking between tree nodes in a hyperbolic tree.

21. (Canceled).

22. (Canceled).

23. (Original) The system of claim 14, wherein said display moves into focus a selected node from a second hyperbolic tree, wherein said selected node was in a contracted subtree.

24. (Original) The system of claim 14, wherein a tree-specific, node-oriented menu is provided for the user to inspect a node information, a path information, and a subgraph-associated system information.

25. (Original) The system of claim 14, wherein said display device is capable of being launched and operated inside a web browser and wherein said display device interacts directly with said analyzer or through a web server.

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26. (New) The method of claim 10, further comprising:

enabling a display of the second hyperbolic tree on the electronic display device in response to a user input being a navigation input to the linking graph that selects the second hyperbolic tree; and

enabling a display of the first hyperbolic tree on the electronic display device again in response to a user input being a navigation input the linking graph that selects the first hyperbolic tree.

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